

Title (en)  
MICROPOROUS FOIL FOR BATTERIES HAVING SHUTDOWN FUNCTION

Title (de)  
MIKROPORÖSE FOLIE FÜR BATTERIEN MIT ABSCHALTFUNKTION

Title (fr)  
FEUILLE MICROPOREUSE POUR BATTERIES, DOTÉE D'UNE FONCTION DE DÉCONNEXION

Publication  
**EP 2510565 A1 20121017 (DE)**

Application  
**EP 10722649 A 20100609**

Priority  
• DE 102009025732 A 20090620  
• EP 2010003439 W 20100609

Abstract (en)  
[origin: WO2010145770A1] Single-layer or multilayer, biaxially oriented, microporous foil having a shutdown function, which comprises at least one shutdown layer I, which comprises propylene homopolymer and  $\beta$ -nucleating agent and polyethylene.

IPC 8 full level  
**B32B 27/32** (2006.01); **H01M 50/417** (2021.01); **H01M 50/489** (2021.01)

CPC (source: EP KR US)  
**B32B 27/08** (2013.01 - EP US); **B32B 27/18** (2013.01 - EP US); **B32B 27/32** (2013.01 - EP KR US); **H01M 50/403** (2021.01 - KR); **H01M 50/411** (2021.01 - KR); **H01M 50/417** (2021.01 - EP KR US); **H01M 50/489** (2021.01 - EP KR US); **H01M 50/491** (2021.01 - KR); **H01M 50/574** (2021.01 - KR); **B32B 2250/242** (2013.01 - EP US); **B32B 2270/00** (2013.01 - EP US); **B32B 2307/30** (2013.01 - EP US); **B32B 2307/50** (2013.01 - EP US); **B32B 2307/518** (2013.01 - EP US); **B32B 2307/72** (2013.01 - EP US); **B32B 2307/724** (2013.01 - EP US); **B32B 2307/734** (2013.01 - EP US); **B32B 2457/10** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP KR); **Y02P 70/50** (2015.11 - KR); **Y10T 428/249978** (2015.04 - EP US); **Y10T 428/249979** (2015.04 - EP US); **Y10T 428/24998** (2015.04 - EP US)

Citation (search report)  
See references of WO 2010145770A1

Citation (examination)  
• US 6596814 B2 20030722 - KIM SEHYUN [US], et al  
• EP 1950821 A1 20080730 - TORAY INDUSTRIES [JP]  
• WO 2007039521 A1 20070412 - CIBA SC HOLDING AG [CH], et al  
• DE 69911624 T2 20040701 - 3M INNOVATIVE PROPERTIES CO [US]

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2010145770 A1 20101223**; BR PI1011646 A2 20160322; CA 2765274 A1 20101223; CA 2765274 C 20180130; CN 102460774 A 20120516; CN 102460774 B 20150114; EP 2510565 A1 20121017; JP 2012531009 A 20121206; JP 5718325 B2 20150513; KR 101741854 B1 20170530; KR 20120069611 A 20120628; MX 2011013920 A 20120223; US 2012171548 A1 20120705; US 8927135 B2 20150106

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**EP 2010003439 W 20100609**; BR PI1011646 A 20100609; CA 2765274 A 20100609; CN 201080027505 A 20100609; EP 10722649 A 20100609; JP 2012515375 A 20100609; KR 20117030002 A 20100609; MX 2011013920 A 20100609; US 201013379227 A 20100609